

Comparisons of Job Characteristics

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)

Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 59

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)

Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|---|
| Building and Construction | 4.0 | 16.9 | 10.7 | << Extensive education and/or training may be required |
| Mechanical | 6.8 | 13.9 | 9.1 | << Extensive education and/or training may be required |
| Administration and Management | 8.4 | 12.8 | 11.0 | < Expanded education and/or training may be required |
| Mathematics | 9.2 | 12.8 | 15.3 | > Current knowledge level is likely sufficient |
| Design | 5.2 | 10.9 | 16.6 | >> Current knowledge level is likely more than sufficient |
| Engineering and Technology | 5.7 | 10.6 | 20.6 | >> Current knowledge level is likely more than sufficient |
| Public Safety and Security | 6.9 | 10.2 | 10.9 | 0 Current knowledge level may be sufficient |
| Personnel and Human Resources | 5.6 | 8.6 | 6.7 | < Expanded education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 44

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)

Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|--|
| Coordination | 9.1 | 12.2 | 10.6 | < A higher skill level may be required |
| Management of Personnel Resources | 6.9 | 11.6 | 10.0 | < A higher skill level may be required |

| | | | | | |
|----------------------------------|-----|------|------|----|--|
| Time Management | 8.9 | 11.2 | 11.5 | 0 | Current skill level may be sufficient |
| Persuasion | 7.4 | 9.6 | 8.1 | < | A higher skill level may be required |
| Equipment Selection | 3.3 | 6.9 | 5.8 | < | A higher skill level may be required |
| Management of Material Resources | 3.7 | 5.6 | 9.7 | >> | Skill level is likely more than sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 88

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)

Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Oral Comprehension | 12.5 | 13.4 | 16.3 | > | Current ability level is likely sufficient |
| Oral Expression | 12.4 | 13.3 | 15.4 | > | Current ability level is likely sufficient |
| Problem Sensitivity | 11.1 | 12.1 | 14.8 | > | Current ability level is likely sufficient |
| Deductive Reasoning | 10.6 | 11.2 | 15.5 | >> | Current ability level is likely more than sufficient |
| Near Vision | 11.1 | 11.0 | 12.5 | > | Current ability level is likely sufficient |
| Written Comprehension | 11.0 | 10.7 | 15.7 | >> | Current ability level is likely more than sufficient |
| Written Expression | 9.8 | 10.6 | 15.1 | >> | Current ability level is likely more than sufficient |
| Inductive Reasoning | 10.2 | 10.4 | 14.1 | >> | Current ability level is likely more than sufficient |
| Visualization | 7.5 | 9.8 | 12.4 | > | Current ability level is likely sufficient |
| Number Facility | 6.3 | 8.2 | 10.1 | > | Current ability level is likely sufficient |
| Time Sharing | 6.6 | 7.9 | 5.7 | << | Extensive improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 83

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)

Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

| Work Activities | Exclusivity of Activity |
|---|-------------------------|
| Assign work to staff or employees | 30 |
| Conduct training for personnel | 30 |
| Direct and coordinate activities of workers or staff | 3 |
| Direct and coordinate construction of mine shafts or tunnels | 89 |
| Direct and coordinate mining operations | 99 |
| Inspect project operations, or site to determine specification compliance | 72 |

| | |
|---|----|
| Perform safety inspections in construction or resource extraction setting | 46 |
| Plan construction of structures or facilities | 75 |
| Prepare reports | 8 |
| Prepare safety reports | 60 |
| Read blueprints | 10 |
| Read technical drawings | 7 |
| Understand construction specifications | 53 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 83

Focus Occupation: Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)
Associated Occupation: Supervisors of Construction and Extraction Workers (47-1011)

| Tools and Technologies | Exclusivity |
|--|-------------|
| Audio and visual equipment | 4 |
| Business function specific software | 1 |
| Calculating machines and accessories | 3 |
| Computer data input devices | 2 |
| Computers | 1 |
| Content authoring and editing software | 1 |
| Data management and query software | 1 |
| Forming tools | 2 |
| Geophysical and geotechnical instruments | 23 |
| Industry specific software | 1 |
| Measuring and layout tools | 3 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.